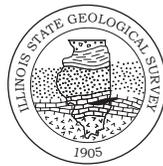




Association of American
State Geologists



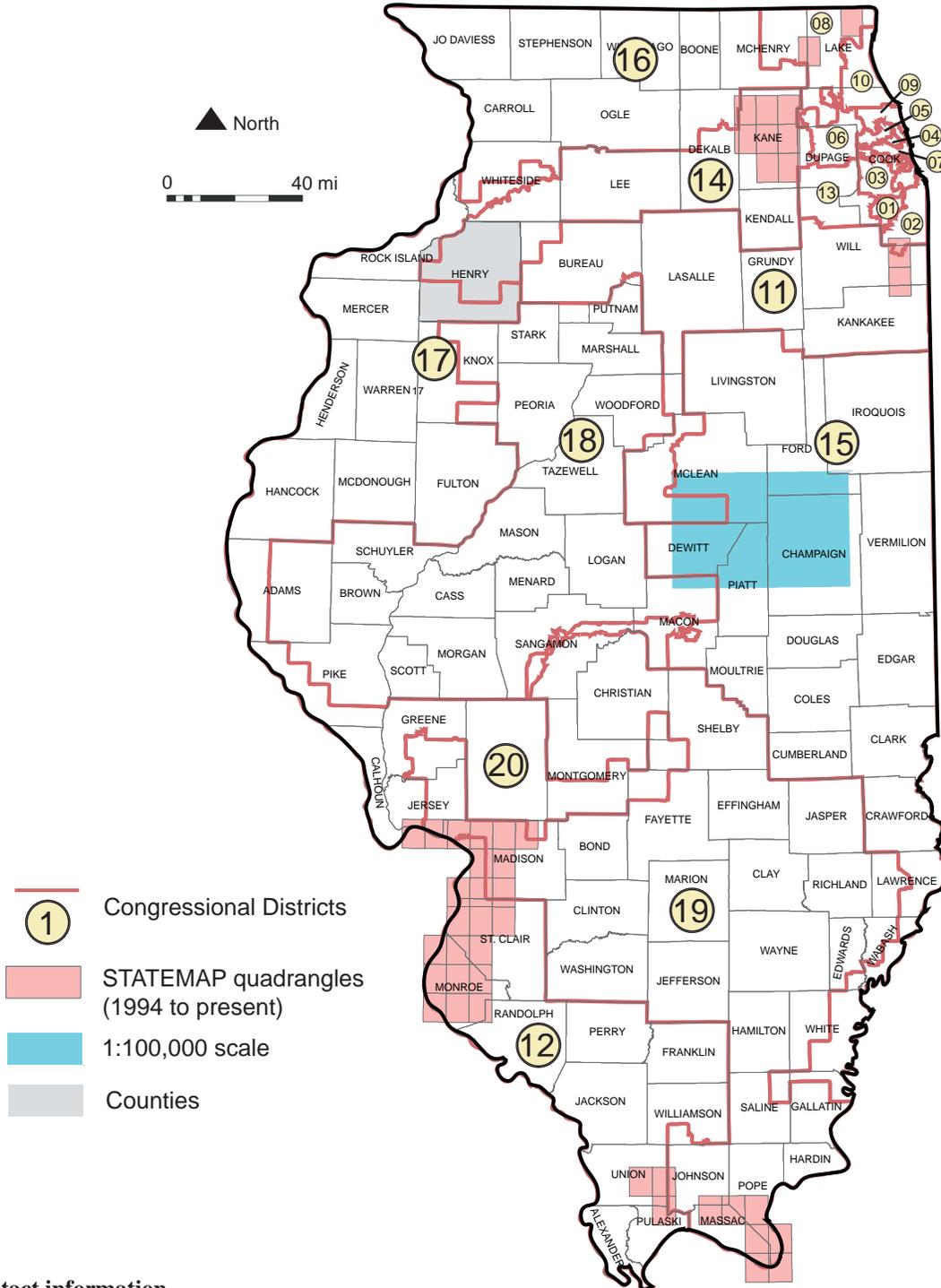
United States
Geological Survey



National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping

ILLINOIS



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SUMMARY OF STATEMAP GEOLOGIC MAPPING PROGRAM IN ILLINOIS

FFY	Quadrangles Mapped	Federal Dollars	State Dollars	Total Project Dollars
1993	Champaign 30' x 60' Quadrangle; Mermet and Reevesville 7.5 min.	\$72,395	\$126,768	\$199,163
1994	Elburn & Geneva; Anna, Cypress, & Mt. Pleasant	80,000	128,270	208,270
1995	Brownfield, Paducah NE, Smithland, Paducah E, and Little Cypress	34,999	69,581	104,580
1996	Henry Co.; Sugar Grove & Aurora N; Alton & Grafton	108,921	109,409	218,330
1997	Pingree Grove & Elgin; Elsah & O'Fallon	100,000	100,000	200,000
1998	Hampshire & Maple Park; Cahokia, French Village, & Millstadt	153,827	263,853	417,680
1999	Beecher W & Steger N; Columbia, Waterloo, & Renault	119,856	196,036	315,892
2000	Wadsworth; Wood River, Monks Mound, Granite City, & Collinsville	138,935	139,176	278,111
2001	Wauconda, Valmeyer, Selma, Paderborn & Ames	184,036	184,512	368,548
2002	Bethalto, Prairietown, Edwardsville, Oakville, Granite City	150,000	150,249	300,249
	TOTALS	\$1,142,969	\$1,467,854	\$2,610,823

The Illinois State Geological Survey has a continuing project to map the geology of the entire state, in three dimensions, from land surface down to and into the bedrock, at the detailed scale of 1:24,000 (1 inch = 2000 feet). The STATEMAP part of the National Cooperative Geologic Mapping Program has contributed significantly to advancing this project. From its inception in 1993, STATEMAP-supported projects have been focused in three areas: 1) mapping the bedrock and surficial deposits exposed in southernmost Illinois, primarily to seek evidence of relatively recent faulting in this earthquake-prone area astride the New Madrid and Wabash Valley seismic zones; 2) mapping the glacial deposits and bedrock in the rapidly urbanizing area on the Illinois side of the Mississippi River opposite St. Louis; 3) mapping the glacial deposits in rapidly urbanizing areas of the western Chicago suburbs; and 4) mapping the glacial deposits at a proposed site for a third airport in the Chicago region. The STATEMAP program also contributed to an important pilot project to create a three-dimensional model at the 1:100,000-scale (1 inch = about 1.6 miles) of the complex glacial geology that underlies the Champaign area.

Illinois' geology is dominated by complexly layered deposits of clay, sand and gravel, and boulders laid down by continental glaciers that repeatedly flowed across the land and melted away during the last 1.6 million years. With few outcrops to study, geologists must rely on drilling to map these deposits in the subsurface, an inherently expensive process. Our state's rich farmland, some of the most productive in the world, owes its fertility to the abundant mineral nutrients in the finely ground rock materials that are the parent materials of the state's soils. The glacial deposits also are the primary source of drinking water for 37% of the state's total population, and more than 90% of the rural population, and contain abundant supplies of sand and gravel for use as construction materials. The people of Illinois, who live on and use the state's earth materials, need more information about the state's geology to successfully maintain natural areas and restore unique habitats, locate new drinking-water sources and keep existing ones free of contamination, and to properly site landfills and other potentially harmful but essential industries.

Careful economic analysis of the costs and benefits of having and using geologic maps, based on the use of geologic maps in Kentucky, the only state that has been fully mapped at the 1:24,000-scale, showed that every dollar invested in geologic mapping will return at least 25 to 39 dollars.